Title: Characterizing BBa_K1718005 on 4C5 co-transformed with inducible Integrase

Goal: Determine the effectiveness of a low copy plasmid and inducing fluorescence

Biobricks used in this experiment: BBa_K1718005

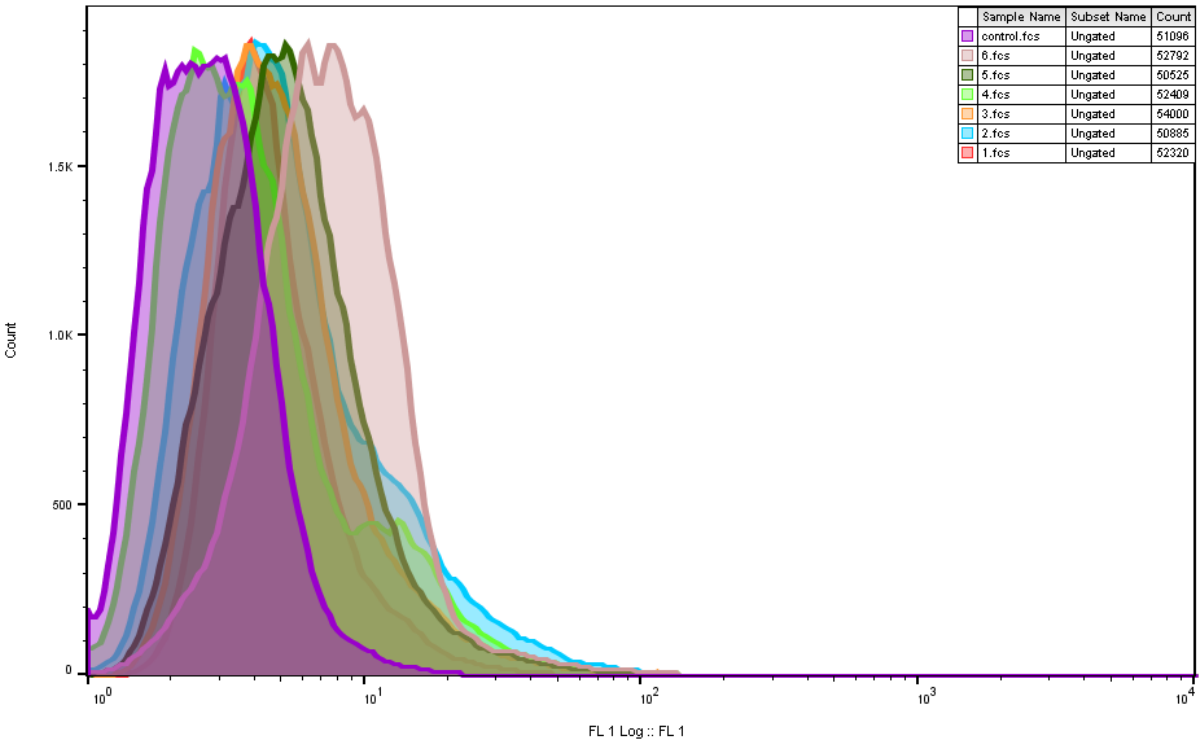
Date range: September 2015

Members that worked on project: Michael Donovan

To test the responsiveness of our integrase in tandem with the leakiness of the gate on a low copy plasmid we co-transformed the Bxb1 integrase behind the arabinose inducible promoter on a kanamycin backbone with BBa_K1718005 on 4C5.

It was tested by growing cells in overnight cultures with varying concentrations of arabinose, from 0% to .2% increasing by .04% for a total of 6 cultures. The cultures were made of 5mL of LB, 5ul of both chloramphenicol and kanamycin, and cells taken from a glycerol stock of cells with the desired plasmids. The 4th culture had low growth.

Flow cytometry was performed on the cells after being resuspended in PBS which returned the resulting data.



With the exception of the fourth sample, which was the culture with low growth, we see a general rightward trend in the peaks, indicating that higher concentrations of arabinose are more effective at inducing the production of the integrase. More tests should be done to confirm this trend and find the ideal concentration.